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## Epilogue

The present study has addressed a number of issues that affected the training environment at the National Training Center from the end of the center's "start-up phase" in 1984 until the close of 1993. Some of those issues had been decided by 1993. Other issues were still ongoing at this writing in the spring of 1996, as efforts continued at all levels to assure the realism of the NTC battlefield and the modernization of what was arguably the best and most innovative military training available anywhere. A new Master Plan to guide the evolution of the NTC into the next century neared completion. Forces Command had under revision new regulations (FR 350-50-1 and FR 350-50-2) to govern, respectively, the NTC and the Joint Readiness Training Center (JRTC), the latter now located at Fort Polk, Louisiana. Publication was planned for the summer of 1996.<sup>1</sup> The updated and revised version of AR 350-50, the Combat Training Centers' regulatory bible, continued under development. In July 1994, after a number of changes, a "final" review draft was sent to the field for comments and coordination. Meanwhile, on 14 November 1994, a CTC Four Star Review produced more directives for changes, as a result of planned future policy changes. As of mid-1996, Change I to AR 350-50 awaited approval and release at Headquarters, Department of the Army, with publication expected in FY 1997.<sup>2</sup>

The data generated at the NTC remained archived at the Army Research Institute at Monterey, California, at the end of 1993, but was relocated to Fort Leavenworth, Kansas during September and October 1994 to become a part of the Army Knowledge Network (AKN). In late March 1996, the AKN was subsumed at Fort Leavenworth under the Archives

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1. E-Mail msg, Capt. Kevin Croteau, ODCST, CTC Directorate, to the author, 10 May 96, subj: FR 350-50-1 and 350-50-2.

2. E-Mail msg, Robert Vaul to the author, 5 Jun 96, subj: AR 350-50. AR 350-50 is discussed in Chapter I, pp. 23-26.

Division of the Center for Army Lessons Learned (CALL).<sup>3</sup> Efforts continued at CALL to fully employ the CTC data to identify lessons learned and to spread that information to Army units and schools through a better publication program.<sup>4</sup>

In an organizational change affecting the NTC, on 15 July 1994, the functions of the Combined Arms Center-Training (CAC-T) at Fort Leavenworth, the executive agent for the data collection program, were assumed by the newly designated office of the TRADOC Assistant Deputy Chief of Staff, Training (ADCST). As a part of the 1994 reorganization, the function of the Combat Training Center Directorate—a part of CAC-T—was transferred from Fort Leavenworth to TRADOC headquarters at Fort Monroe. On 1 October 1994, at Fort Monroe, the Collective Training Directorate of the Office of the Deputy Chief of Staff for Training was redesignated the Combat Training Center Directorate.<sup>5</sup>

Despite continued discussion and prospects for full brigade operations with three maneuver battalions in the field, the NTC remained a more restricted brigade battlefield with the focus on the battalion task force. One reason, and a major reason, for the delay in fielding three battalions simultaneously was the Army's continued failure to acquire more acreage through withdrawal of public land for military use—an action that required congressional approval. When, at the close of 1993, the fate of the California Desert Protection Act (CDPA) remained uncertain, the Army essentially put on hold its efforts to acquire more training land north and east of the present Fort Irwin, pending the outcome of the CDPA legislation. Finally, after a fiercely partisan struggle that had lasted eight years, the Senate on 13 April and the House of Representatives on 27 July 1994 passed similar but not identical legislation to enact the CDPA. However, in early October 1994, just hours before Congress adjourned, both houses approved a compromise conference report that retained an agreement not to include the land adjacent to Fort Irwin that the Army desired. Army and NTC efforts then continued, to convince the Congress of the need for the additional land. At this writing, congressional committee hearings were planned in the near future, and the California Assembly had approved the transfer of the

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3. Chapter VIII discusses NTC data archiving through 1993. After relocation, the data collection, which also included data from the JRTC, the Combat Maneuver Training Center (CMTTC) at Hohenfels, Germany, and the Battle Command Training Program at Fort Leavenworth, was designated the Combat Training Centers (CTC) Warrior Information Network (CTC WIN), but subsequently renamed CTC Archives.

4. CALL publications included Combat Training Center Bulletins, CTC Trends, From the Front newsletters, CALL Newsletters (monthly), and CTC Quarterly Bulletins.

5. TRADOC Annual Command History, CY 94, pp. 11-12.

land to the Department of Defense and Fort Irwin. Funding for the project, however, remained uncertain.<sup>6</sup> Assuming the approval of Congress, the Army still had to provide for the instrumentation and data collection capability for the land expansion area.

Efforts continued in 1996 to modernize the NTC OPFOR, especially with regard to new surrogate vehicles to replace the aging and deteriorating fleet of Vietnam-era M551 Sheridan armored reconnaissance vehicles currently visually modified to replicate Soviet vehicles. Department of the Army and NTC officials concerned about denigration of training at the NTC, pointed out that OPFOR capabilities lagged technologically and could not adequately replicate the required force on the battlefield. During 1994, the OPFOR Surrogate Vehicle (OSV) program received partial funding, and low rate production of prototypes of one version of the OSV began in September 1994 at Red River Army Depot, Texas. By 1996, several of the prototypes had been fielded at the NTC. Plans for the future were to relocate the OSV efforts to Anniston Army Depot, Alabama, in light of the projected closing of Red River Depot.<sup>7</sup>

The Army also continued development, testing, and fielding of the Aircraft Survivability Equipment Trainer IV (ASET IV). The ASET IV provided Army aviation crews with realistic force-on-force training against MILES-compatible ground-based threat emitters that simulated enemy air defense systems. The ASET IV also provided a simulated ground-to-air offensive air defense capability. That capability enhanced the training opportunities available to aviation units by expanding the simulated threat environment in which BLUFOR aircraft operated. In short, the system provided the first real opportunity to assess OPFOR and BLUFOR aircraft impact and casualties. Initially, fielding was scheduled for late in FY 1994, but the date was extended to early FY 1996 to allow for additional system upgrades when the HMMWV-based system proved not rugged enough for the hostile operational environment at the NTC. The first of three ASET IV systems was fielded at the NTC in November 1995.<sup>8</sup>

When first fielded at the National Training Center in 1982, the OPFOR consisted of the 6th Battalion, 31st Infantry (Mechanized) and the 1st Battalion, 73rd Armor. In January 1987, the 177th Separate Armored Brigade assumed

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6. ODCST, June-December 1995, p. 75. Chapter III treats the subject through 1993.

7. Memorandum to distr, ATTG-UC, 14 Feb 96, subj: CTC Program Initiatives.

8. (1) Tactical Engagement Simulation Master Plan, Coordinating Draft, 1 May 94, p. 6-6. (2) TRADOC Annual Command History, CY 92, p. 121; CY 94, p. 61. (3) Semiannual Staff Historical Report, 1 Jul-31 Dec 95, p. 74.

OPFOR duties. On 26 October 1994, in an inactivation and activation ceremony at Fort Irwin, the 11th Armored Cavalry Regiment, a unit formerly assigned to United States Army Europe, assumed the OPFOR duties and assets.<sup>9</sup>

As earlier discussed, efforts had begun in 1991 to upgrade the MILES- (Multiple Integrated Laser Engagement System) based instrumentation system at the NTC. Fielding of the Simulated Area Weapons Effects/ MILES II, which was based on the Global Positioning System (GPS), had begun at Fort Irwin late in 1994 and continued in mid-1996. Addition of the GPS provided the capability to portray the effects of indirect fire, mines, and chemical and nuclear warfare. The sophisticated new system could provide position location of soldiers and vehicles with affixed detection devices within an accuracy range of 15 meters, as well as acoustically-based mine effects simulation. To simulate chemical weapons, the SAWE activated M8A1 Chemical Agent Alarm Systems and defined the casualty area in a manner that approximated the continuing lethal nature of chemical weapons. In April 1995, a contract was awarded to Cubic Defense Systems for "MILES 2000," to further enhance replication of the realistic battlefield during tactical engagement simulation. MILES 2000 would replace the deteriorating ground-direct-fire devices developed in the 1970s.<sup>10</sup>

The Air-to-Ground Engagement System/Air Defense (AGES/AD), a variant of the MILES, provided the capability to simulate the effects of tactical engagements of the Army AH-1 Cobra, the UH-1 Iroquois (Huey), and the OH-58A/C Kiowa rotary wing aircraft against ground weapons systems. In mid-1996, an AGES II program was ongoing to provide tactical engagement simulation systems for the AH-64 Apache, the UH-60A Blackhawk, the CH-47D Chinook, and the OH-58D Kiowa Warrior.<sup>11</sup>

The Air Warrior Measurement Debriefing System (AWMDS) provided the integration of Air Force aircraft into the vertical dimension of the simulated combined arms battlefield.<sup>12</sup> The system when combined

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9. (1) NTC Vol I, p. 85-86. (2) Sgt 1st Class Ed Caum, "Ready Rifles Prepare for Transition to 'Eaglehorses'," *Tiefort Telegraph*, 9 Sep 94.

10. See Chapter V of this volume for MILES and other instrumentation developments through 1993. (1) ODCST, Semiannual Staff Historical Report, 1 Jul-31 Dec 95, p. 73. (2) TRADOCACH, CY 1994, pp. 78-81.

11. (1) Force-on-Force Collective Training Using the Tactical Engagement Simulation Training System, Coordinating Draft, 7 Feb 94, pp. 2-28 to 2-30. (2) TRADOCACH, CY 1994, p. 80.

12. During earlier Air Force development efforts, the AWMDS was usually referred to as the Red Flag Measurement Debriefing System (RFMDS). As the NTC and the Red Flag programs became more integrated, the name was changed, at least with regard to NTC participation. See Chapter VII above for Air Warrior development.

with the NTC instrumentation was designed to support air-to-ground and ground-to-air tactical engagement simulation between high performance aircraft and Army ground forces. As the NTC became increasingly involved in the installation of the SAWE/MILES II and a concurrent upgrading of the Range Data Measurement System, a joint NTC-AWMDS committee monitored the progress of the improvements to determine their effects on Air Warrior. Modifications to the AWMBS would be necessary if the system was to remain compatible with the NTC instrumentation system. While in 1996 the Air Force continued to experience operational problems, the Air Combat Command Requirements Office was working to fund system upgrades.<sup>13</sup>

In 1994, a new term—Reception, Staging, Onward Movement, and Integration (RSO&I)—entered the NTC lexicon. An outgrowth of the post-Cold War era, the concept and its resulting program at the NTC were designed to exercise rotating units in force projection doctrine during their first week of training. RSO&I was driven by an analysis of the specific elements of the deployment process: unit arrival in theater (reception); the building of combat power and integration of combat-ready equipment and personnel (staging); unit deployment from the staging area to its gaining command in the field (onward movement); and unit arrival at the tactical assembly area of the gaining command and integration into its command and control structure. Rotational units deployed to the NTC based on a prearranged scenario. The units became part of "Joint Task Force (JTF) Mojave" within the area of responsibility of "U.S. Irwin Command (USIRCOM)." The NTC commanding general played the part of the USIRCOM commander-in-chief, and the commander of the Operations Group assumed the role of Commander, JTF Mojave and U.S. Army Forces. Various elements of the NTC portrayed certain essential steps in successful deployment according to doctrine (e.g., the Army Materiel Command prepositioned equipment site was simulated by the NTC draw yard). After action reviews assessed the outcome of the exercise against the background of requirements for deploying units as set forth in FM 100-5, *Operations*, June 1993.<sup>14</sup>

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13. (1) ODCST Semiannual Staff Historical Report, 1 Jul-31 Dec 69, p. 76. (2) TRADOCACH, CY 1994, p. 61.

14. See FM 100-5, Chapter 3, Force Protection. Several recent publications and messages describe the somewhat complicated concept of RSOI. These documents include Col. Russel L. Honore, "Onward Movement," CALL CTC Bulletin 94-1, March 1994, pp. 13-14; NTC Briefing, Reception and Onward Movement, January 1995; msg, HQDA to distr, 082000Z Nov 95, subj: Reception, Staging, Onward Movement, and Integration; Maj. Dan McRoberts, Chief, G-2 Plans, Ops Grp, Fort Irwin, CA, Reception, Staging, Onward Movement and Integration (RSOI), CALL, News From the Front, Mar-Apr 96.

Beginning in the spring of 1994, the National Training Center played a major role in the United States Army's efforts to define the force of the 21st century. During rotation 94-07, 10-23 April 1994, the training center served as the site for what exercise planners termed an "advanced warfighting experiment," or AWE. The AWE—dubbed exercise Desert Hammer VI—featured the electronic linking by digital circuits of the weapons of a battle force. Senior Army officials believed the creation of the "digitized battlefield" was crucial to the Army's efforts to maintain a small modern force capable of decisive victory. Digital data networks, by facilitating rapid transmission of critical battle information among units and soldiers throughout the battlefield, made possible shared "situational awareness." The technology potentially allowed an Army commander to visualize the battle much more clearly and to control its pace by synchronizing the actions of tanks, fighting vehicles, fire support, command centers, helicopters, and unmanned aerial vehicles. The new technology provided the commander the capability of automated tactical reporting, enhanced position location of friendly and enemy forces, and improved acquisition and surveillance. All those capabilities were tested during NTC Rotation 94-07, demonstrating the principle but with mixed results. The 1994 AWE at the NTC was overlaid upon the regular rotation of elements of the 24th Infantry Division, for whom it was training business as usual.<sup>15</sup>

As the lessons learned during Rotation 94-07 were being assessed, the NTC prepared to host another AWE during rotation 97-06, 8-22 March 1997. Plans were for Task Force XXI, a brigade-size experimental task force, to conduct operations in a joint environment against a live and simulated opposing force. Task Force XXI was to be formed from the U.S. Army's Force XXI experimental division, or EXFOR, currently (summer 1996) conducting exercises at Fort Hood, Texas, in search of a design for a 21st century Army division and to identify weapons systems and doctrine for the smaller Army of the future.<sup>16</sup> During the AWE, the EXFOR units would test digital communications equipment, night-fighting equipment, and other technologies to assess the capabilities of the new division. Rotation 97-06 would also test the interoperability between armor, mechanized, and light infantry units. In the words of TRADOC commander General

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15. (TRADOCACH, CY 1994, pp. 127-28). (2) Alice F. Edwards, "High-Tech Training in the High Desert," *Army Trainer*, Summer 1994, pp. 24-33.

16. A CSA directive established Force XXI in February 1995; Task Force XXI was fielded at Fort Hood in March 1995. A division-level AWE was scheduled for November 1997. Briefing, CALL, 15 May 96, subj: Documentation of Historical Lessons.

William W. Hartzog, "what soldiers will be trying to do at the NTC in March—[is] showing that the Force XXI experimental division works."<sup>17</sup>

As the U.S. Army's National Training Center at Fort Irwin in California's high desert region celebrated, in 1996, its fifteenth anniversary, the Army and the nation had reason to endorse the continued development of the center. Developers looked to the day when the maneuver area of Fort Irwin could be expanded. Some controversy surrounded the use of the NTC for advanced warfighting experiments—an activity some saw as a threat to the focus on training that had been foremost in the NTC concept from the beginning. On the other hand, NTC officials and players alike found it exciting to be in the forefront of the efforts to employ advanced technology in creating the future force. Despite the continued reduction of defense budgets, Army and NTC officials remained dedicated to the acquisition of new and improved equipment and of the most sophisticated instrumentation system available—to ensure that the units that would train at the NTC had already fought their first battle of the next war.

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17. (1) TRADOC News Service (Jim Caldwell), 3 Jun 96, subj: AWE to Explore Capabilities, Interoperability of Task Force XXI. The EXFOR was made up of the 1st Brigade, 4th Infantry Division (Mechanized), Fort Hood, Tex., and the 1st Battalion, 5th Infantry, Fort Lewis, Wash. The Force XXI program and the EXFOR program began in the spring of 1994. Force XXI is discussed in detail in TRADOC Pam 525-5, Force XXI Operations, 1 Aug 94.



## Task Force Deliberate Attack

The tactical engagement maneuvers described below took place on 16 June 1986 when a BLUFOR armor task force rotating through the National Training Center, launched a deliberate attack on an OPFOR motorized rifle company. The account of the battle that follows was extracted from the task force's take home package analysis as reprinted in the Army Research Institute notebook provided to personnel who attended the data workshop at the ARI Field Element at Presidio of Monterey, California. Transcribed and edited portions of the communications tapes of that same battle have been integrated with the narrative. The transmissions over the task force command network took place at 0705 to 0800 hours. As noted in the text, the communications tapes probably present the confusion of the battlefield and the enthusiasm of the task force soldiers more graphically than any written record can.

### Call Sign Identification

#### Task Force Headquarters

November 81 — Task Force Commander  
 November 97 — S-3  
 November 18 — S-2  
 November 56 — Task Force Fire Support Officer  
 November 23 — Task Force Air Liaison Officer

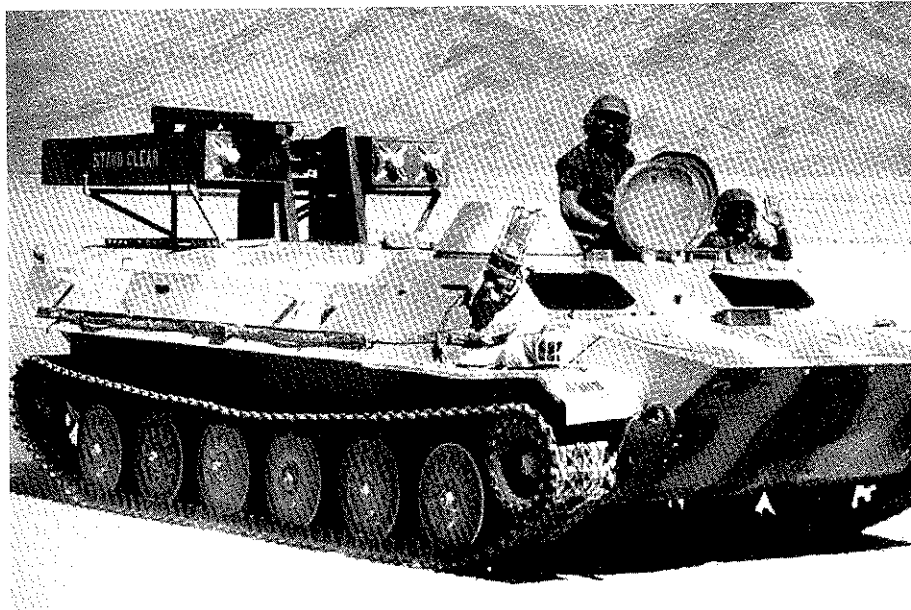
#### Maneuver Companies

ALPHA — Team A (mech infantry)  
 BRAVO — Team B (armor)  
 FOXTROT — Team C (mech infantry)  
 DELTA — Team D (armor)

The task force was composed of two mechanized infantry companies, Teams A and C; two armor companies, Teams B and D; and a task force headquarters with two engineer platoons and an antitank platoon. BLUFOR weapons included 22 tanks, 29 M113 armored personnel carriers, 6 TOW weapons systems (tube-launched, optically-tracked, wire-guided heavy antitank missiles), 17 Dragon infantry antitank weapons systems, 6 mortars, 3 Vulcan air defense guns, and 84 infantrymen. The OPFOR engaged with 4 T-72 tanks; 12 BMPs; 3 mounted Sagger wire-guided antitank missiles (all were visually-modified M551 tanks); 2 MT-LBs (Soviet-built multi-purpose tracked vehicles much like the American-built M113); one ZSU-23-4 self-propelled anti-aircraft gun (visually modified M551); 4 HIND-D helicopters (visually-modified UH-1s), and 43 infantrymen. Both the BLUFOR and OPFOR received U.S. Air Force close air support. The maneuvers depicted took place in the southern maneuver corridor at Fort Irwin.



*During the battle, this ZSU-23-4—a visually modified M551—served as an OPFOR antiaircraft gun system.*

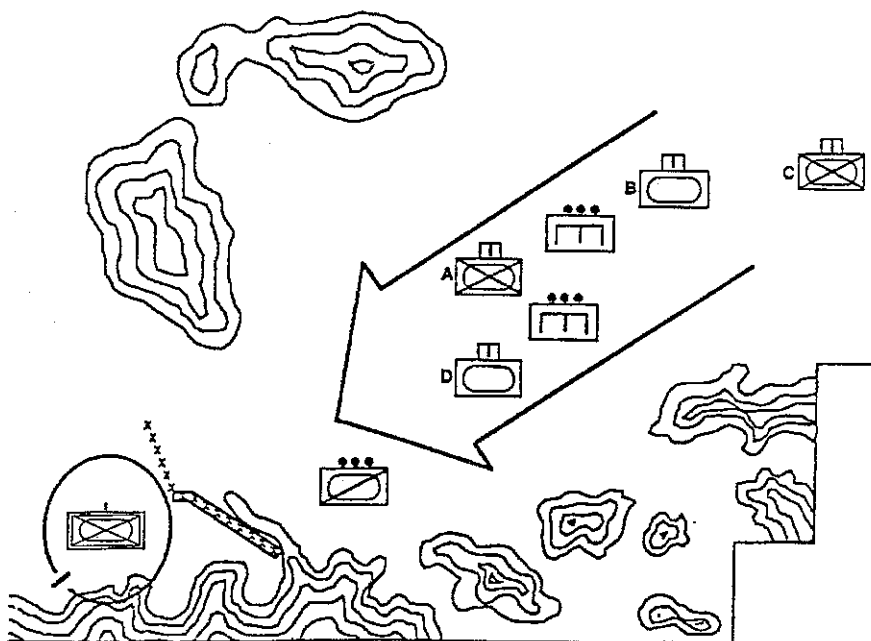
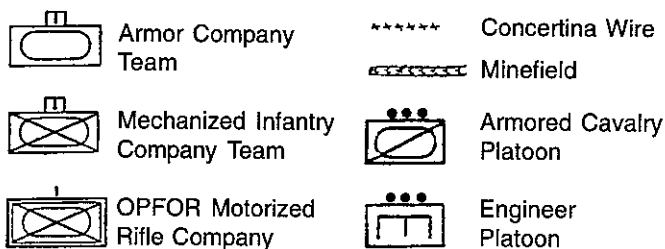


*In NTC rotations during the 1980s, the OPFOR had employed, twelve Soviet-built MT-LB multi-purpose tracked vehicles to simulate SA-13 air defense systems.*



*The Soviet-style BMPs and T-72 main battle tanks (visually modified M551s) made up the bulk of the OPFOR equipment for this NTC battle.*

The task force plan was to conduct a night road march in two columns to the line of departure reaching it before first light. The two tank teams with the antitank platoon (TOWs) would set up in overwatch positions when they reached objective FOX. Teams A and C (the infantry teams) would then assault the objective with the two engineer platoons. The scouts would go ahead to reconnoiter the objective area. After seizing objective FOX, the task force planned to conduct a night operation on two axes to seize objective SNAKE. As the two tank teams and the antitank platoons suppressed the second objective, Teams A and C would assault.



The task force reached the line of departure (LD) at approximately 0500. In the opinion of the authors of the after-action mission analysis, the task force "doomed itself to certain high attrition even before it ever crossed the line of departure." Even though the operations orders were generally adequate and were understood by subordinate leaders, they neglected obstacle breaching—a critical element. The tank teams, assigned to overwatch, saw no need to address it; the infantry teams considered it the engineers' responsibility; and the engineers planned the actual breach but considered security, obscurity, and suppression the functions of the maneuver teams. To compound the problem, the scouts were halted three kilometers short of the obstacle by an OPFOR security BMP, and therefore acquired no information on OPFOR disposition or obstacles.

When first light came, other difficulties were revealed. During the night move, Team C had been unable to find its link-up point, and the unit became intermixed with other units. Team C did not fully regroup until dawn and lagged well behind the rest of the task force. Also at the LD, when Team B became confused and stalled, Team A passed through, taking the lead. The task force commander believed it might be disastrous to wait for Team C to catch up or to reverse the positions of Teams A and B. The appearance of an OPFOR HIND-D reinforced his decision to continue in his present configuration.



*During the deliberate attack mission, a UH-1 Huey, modified to resemble a Soviet HIND-D gunship, is "killed" by a main gun round from the operations officer's tank.*

The movement itself was well controlled, despite continuous attacks from OPFOR ground forces and close air support helicopters, one of which was "killed" by a main gun round from the operations officer's tank. During the movement toward the first objective the tactical operations center (TOC) was hit with a chemical attack which negated any future impact it might have had on the battle.

The transcript extracts that follow have been extensively edited, though every attempt has been made to preserve their substance.

### **Task Force Command Network (Extract No. 1)**

*Bravo, Bravo. November.*

*Get to the head of the column.*

*Enemy air! Enemy Air! Enemy Air!*

*November 81. November 48. The 201 has been hit, probably by persistent [chemical] agent vicinity Papa Lima Run.*

*Roger. Let's get them decontaminated.*

*Alpha, Alpha, this is November.*

*This is Alpha.*

*Roger. Are you going to get your infantry out there?*

*Roger. Pull up close behind him so you can get your infantry out if you have to.*

*18, 18, this is 97.*

*You want one eight or eight one?*

*I want one eight. 18, 18, this is 97.*

*Come on Alpha. Let's get those infantry out. Let's go.*

*18, 18, 97 over.*

*Let's go!*

*Alpha, Alpha. November. SITREP [situation report].*

*This is Alpha. We are engaging one T-72 [OPFOR main battle tank] up on the hill with the dismounts.*



*This visually modified M551 Sheridan tank served as a Soviet-style BMP armored personnel carrier for the NTC OPFOR. The surrogate BMP had a simulated 73-mm. main gun barrel and a Sagger antitank missile.*

*Roger. You got them dismounted already?*

*This is Alpha. We're swinging around now to dismount.*

*Roger. You need any more help up there?*

*I don't think so. We just got to swing these people around.*

*81, this is 56. We could call some artillery on those guys.*

*Roger. Get your FIST [fire support team] to work up an artillery plot and we'll call it on top of them.*

*Delta, Delta. This is November, SITREP.*

*This is Delta.*

*Try to maneuver around to your right, right now, and try to support the Delta team. Break. It looks like we have pretty good positions to bring fire on the T-72. Let's kill him!*

*81, this is 23. Let me get a grid from Alpha, and I'll pass it to you.*

*Roger.*

*The TOC! The TOC.*

*Roger. Get decontaminated*

*Has the ALOC [Air Liaison Operations Center] been hit? I think they've already been hit. Alright, now, you've got to take control of the battle and pass that information on to higher. We got one BMP [OPFOR infantry fighting vehicle] and one Sagger [OPFOR antitank missile] team destroyed vicinity 364889. Right now the Alpha team is engaging a T-72 with some dismounts.*

*81, this is 23. We got fighters due in five minutes.*

*Roger. 56, you got artillery going in at that grid?*

*It just got shot.*

*Roger. Which ACA [airspace coordination area] is that?*

*Foxtrot, Romeo, Alpha, November.*

*You got that 23?*

*Roger. Let me confirm that grid. 378910*

*Roger. 378910*

*Hind-D [OPFOR helicopter] due west of formation! Enemy air! Enemy Air! Engage him!*

*He's gone behind OP2 (observation post 2) complex [hills just east of Langford Lake].*

*I got some ADA (air defense artillery) guys on the ground ready to engage him.*

*Alpha, Alpha. This is November. SITREP.*

*I'm swinging my tanks around to the left over there where the Delta tanks have the enemy.*

*O.K. Is the enemy killed or what?*

*I'm trying to find that out.*

*Delta. This is Alpha. There was a Delta tank by where the enemy was. Did you kill him?*

*Roger. One BMP and one Sagger team.*

*Enemy Air! Enemy Air! Hind-D to the north by OP2, over.*

*Let's get that air in here. Come on!*

*They're supposed to be coming out of the north.*

*Roger, they're exactly ass-backwards. They got it turned around.*

*How about that HIND-D? Can an A-10 take that out?*

*That's a negative on the air. Out here.*

*Delta and Alpha, you've got incoming. You are going to have to keep on moving. The artillery is coming in on top of you. You're going to have to move. Go forward!*

*81, this is 97. My gunner just killed the HIND-D. He's in the north with the light blinking.*

*Break, break. Alpha, Alpha. Delta, Delta. This is November. You got to move through the artillery. You got your tanks parked in the rear standing still. Now move it through.*

*This is Delta. If I move anymore, I'll be right in their kill zone.*

*You've got your infantry up there. Use them!*

*Alpha, can you move your rear tanks up so they don't get hit anymore?*

*You got three tanks back here. I guess they're shooting at something.*

*Bravo, are those your tanks or are those Alpha's?*

*Those are my tanks. Oh wait. I got one with a hit. I got to find out why.*

*You're talking about the wrong tanks. I'm back on the left.*

*A-10s departing and coming in now from the north.*

*Alpha, alpha. November. Did you kill something on your left rear?*

*That's A-10 on those T-72s.*

*This is 23. Could you talk to Alpha or Delta or whoever that is and tell them those A-10s are coming in on the tanks?*

*Roger. I'm trying to. Delta, Delta. This is November. Those A-10s doing you any good up there?*

*Affirmative. They were right on. Over.*

*Bring back in again 23. This time kill them.*

*November. This is Foxtrot. Foxtrot is niner, niner, niner. I'm taking over.*

*Roger. What got him?*

*Artillery.*

*Enemy air! Enemy air! Inbound. Coming in from the west and east.*

*November, November, this is Delta. We got one BMP and two T-72s up here. Break. Grid 362, correction 366879. I've got my dismounts on the ground trying to maneuver on them.*

*November 81. Charlie 48. You got two T-72s and a BMP vicinity OP1 chasing a 113 [M113 Armored Personnel Carrier].*

*November 18. This is November 97. Is the S-2 in MOPP-4 ["mission-oriented protection posture"—the highest level of nuclear, biological, and chemical protective gear.]?*

*Roger.*

*97, this is 56. If you can back off, I can shell them [the two T-72s] with everything I got.*

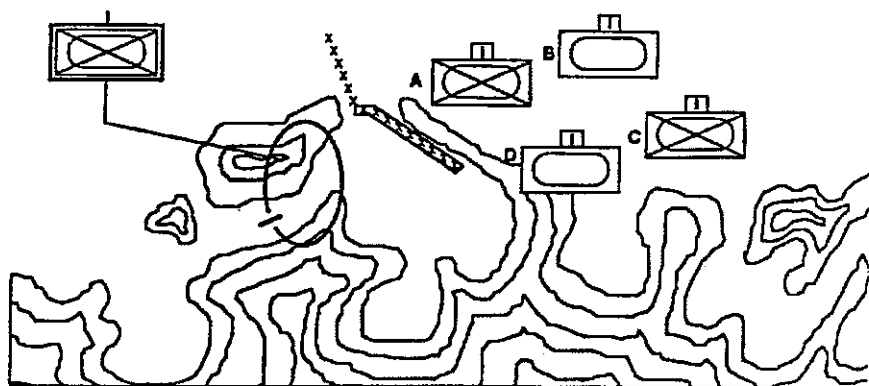
*Delta, Delta. This is November. Could you back your guys off. We are going to fire danger close.*

*Delta. This is November. Did you get them out of there? Can we fire that mission?*

*I'm pulling back now.*

Team D made the initial contact against an OPFOR dismounted element on the southern ridge just in front of the obstacle. The obstacle was on the OPFOR side of a low finger of land, which made it impossible for the task force to see it until they were right on top of it. Team D swung into the

ridge behind its now dismounted infantry and moved closer to the objective. The rest of the task force stalled behind the finger of land. As OPFOR field artillery intensified, Team A was ordered over the finger, where it immediately ran into wire, mines, and direct fire supplementing the artillery. Team A forced a breach thirty minutes later, during which time it was hit with 1,945 artillery rounds and lost every officer in the company.



### Task Force Command Network (Extract No. 2)

*November. This is Alpha. Got a T-72 around checkpoint six. We're engaging him.*

*Roger. Let's get him.*

*We've also got a minefield up here in front of us. I'm trying to find a bypass.*

*November. This is Delta. Shoot arty [artillery] on that grid. I got my guys back.*

*56, 56. This is 81. Put arty on that grid 362882-now! Fire away!*

*Alpha, you got through the minefield yet? Have you got the minefield breached and the BMP killed yet?*

*We are breaching the minefield at this time.*

*What about the BMP? Did you kill him?*

*Roger.*



*The BMP struck terror in the hearts of the BLUFOR during this deliberate attack.*

*Get through that minefield so you can help the Delta element.*

*November, this is Alpha. We got another BMP over here to our left front. Break. We had a Dragon [infantry antitank missile] going after it. He killed the gunner on the Dragon. I'm going to send a loader to get that Dragon and help him out and send a tank around and try to get that BMP.*

*Roger. Get him out of there and get through that minefield so you can get up around the enemy!*

*Delta, what are your vehicles doing on the right side? Are they getting around?*

*Roger. They're going wide right now.*

*Could you get me a grid for the enemy? a good grid?*

*Roger. Enemy grid 342882. Three T-72s.*

*23, did you copy?*

*342882*

*Roger. Three T-72s. Get them in there.*

*81, 23. Be advised our fighters have to go back to the IP [initial point]. They'll be reattacking from the IP.*

*Alpha, Alpha. You got through yet?*

*This is Alpha. Roger. We got a breach. Marking it with green smoke. Trying to get some engineer tape on it.*

*Roger. Let's get through it up there. Watch out to your left. Try to get back down to your right behind those guys holding Delta up.*



*When unable to clear a path through mines, barbwire and other obstacles or to see through thick smoke and dust, BLUFOR vehicles increasingly fell victim to the OPFOR's attack.*

*Roger. I got a BMP on my left. I've got a tank and a Dragon trying to get it. We'll get rolling.*

*Hustle it up. We got to move.*

*23. This is 56. I'm firing on that grid. As soon as I'm finished you can come up with the birds.*

*November. This is Delta. I need that Foxtrot element up here. There's about 20 dismounts with Vipers [unguided antitank rockets]. Break. Trying to engage them now. They're engaging my [?]. Break. If you can get up India you can take them out. My blue element right now has 5 KIAs [killed in action] and 4 WIAs [wounded in action], and they took out one BMP. But I need some support.*

*Delta, Delta. This is 97. I'm firing on that grid. As soon as they clear out, I'm sending the A-10s back in. If you look down to your right down by OP1, there's three 113s and a TOW [tube-launched, optically-tracked, wire-guided heavy antitank long range missile] moving down there. That could be Foxtrot.*

*This is November. Are you through the breach?*

*Roger. We're through.*

By then, task force fire support was continuous with BLUFOR artillery alternating against reported targets which were being called by grid coordinates. In one case, Team A called in a correct coordinate only to have the battalion commander transpose two digits when he relayed the coordinates to the artillery. The fire support officer (FSO) transposed two other digits when he relayed the information back to the air liaison officer (ALO) controlling the A-10s in close air support. The positions Team D were reporting were so close as to cause the team to back up before they could be fired. One aircraft flew through falling artillery and was destroyed.

The net result was that the fire support elements were too busy reacting to independent calls for fire and thus were unable to mass fires at any one critical point, as doctrine demanded. Battalion leaders never developed a clear picture of the battlefield. When the mortars called to offer assistance, no one knew where to send them, so they spent the battle in the rear, out of range.<sup>1</sup> Meanwhile, Team D lost most of its infantry as it continued to

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1. Commanders' failure to use mortars had been a serious concern of senior Army leaders from the earliest days of training at the NTC.

push against ever increasing resistance. When the team commander called for help, Team C was ordered forward to support Team D.

Team C was located at the base of the southern ridge just to the rear of the seam between Team D on the ridge and Team A on the other side of the finger of land. As Team C started forward, it encountered destroyed tanks, APCs, Improved TOW Vehicles, and Vulcans. Initially mounted, Team C came under heavy fire. It reported it was behind Team D and would be moving forward dismounted. Team D continued to call for help and reported it could not see Team C. Team C pressed ahead and lost its commander, who was replaced by the 1st platoon leader. Team D continued to call for help when the task force commander received reports that Team C was far to the right of the task force and wandering around in the desert. The new commander reported that they were continuing to move through the rear of Team D.

Neither Team C, nor the rest of the the task force, knew Team C was wading into the center of the storm between Team D and Team A. A few minutes later the 1st platoon leader was removed from the battle and replaced by the 3rd platoon leader. Team A finally reported a breach which it marked with green smoke. Team B, which had spent the battle in relative safety behind Team A was ordered forward. Team B had first to police up its infantry who had dismounted earlier. That accomplished, the infantry were sent over the finger to find the gap Team A had provided. Team B found only the destroyed remains of Team A and could not locate the breach.

### **Task Force Command Network (Extract No. 3)**

*Alpha! Talk to me.*

*I'm engaging a T-72 right now! Wait!*

*Alpha, Alpha. November.*

*November. This is Alpha.*

*SITREP!*

*Roger. Right now we are engaging a BMP. We engaged two BMPs and destroyed them. We're moving up.*

*Roger. Ok. Let me know what's going on up there. Don't depart the net like that.*

*Bravo, Bravo. November. Get your people mounted up again and get through that breach up there!*

*Is the breach secure?*

*Yes, damnit. Get them up there. Hurry up! Hurry up!*

*56. Fighters are reconstituted and we're ready to bring them back in.*

*Hold on! Can you stop them? I got a mission in progress.*

*Roger. We'll hold up at the IP.*

*Bravo, Bravo. This is November. Get your people mounted back up and get them through the breach. Hurry! You're too slow! Hurry up.*

*23. Are they (aircraft) ready to go?*

*Be advised 56 is firing a mission right now. 56 are you clear?*

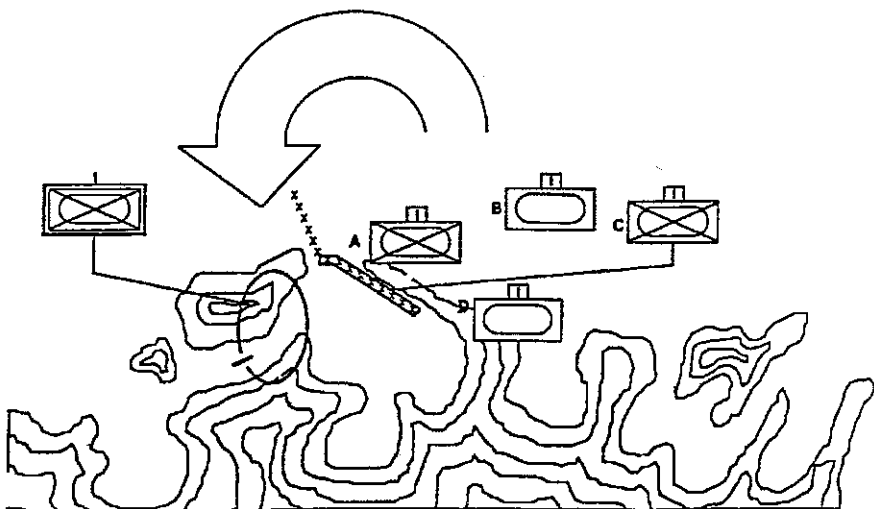
*Roger.*

*23, send the birds in now.*

*Roger. Departing IP at this time. Implement Juliet. Implement Juliet.*

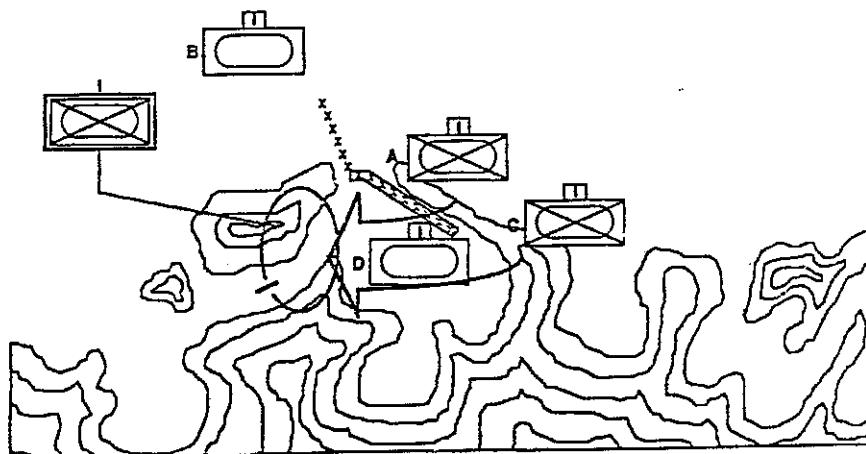
*81, 81. 97. I talked to Bravo. He's bringing his tracks up. He just dismounted and he's looking for that breach. He's waiting for his tank platoon to get there.*

Since Team A had reported the breach on its right flank, the task force commander told Team B to swing around the right side of Team A. The Team B commander had no idea where the right flank of Team A was



and took his two tank platoons in a wide arc around the finger. They ended up due north of objective FOX, exposed on the flat desert floor. Three tanks were destroyed almost immediately; the rest found what cover they could. The team was picked off one by one.

Team D finally broke through lessening OPFOR fire and launched into the objective with only a pick-up team of platoon strength, all that was left. They plowed into the southern flank and surged halfway across before they were halted. The battle had cost them their commander and all three platoon leaders. The OPFOR, having lost three tanks and eight BMPs, called it quits and vacated the position.



**Battle Damage Assessments and Statistics****Task Force Personnel Losses (KIA/WIA)**

Unit	Cdr	XO	Plt Ldr	Plt Sgt	Sqd Ldr	Tk Cdr	Total Personnel
Team A	0/1	0/1	0/3	0/2	1/2	0/1	14/29
Team B	0/1	0/1	0/1	1/2	1/1	0/3	13/20
Team C	-	-	1/0	1/0	-	-	7/17
Team D	-	-	0/3	0/2	0/1	0/2	6/28
TF HQ	-	-	1/0	0/1	-	-	4/14

**Task Force Vehicle Losses**

	Tank		APC		TOW	
	Start	Lost	Start	Lost	Start	Lost
Team A	3	3	10	4		
Team B	8	8	5	3		
Team C	2	2	12	4		
Team D	7	7	3	0		
TF HQ	2	0	1	1	6	3

**Task Force Losses**

System	Start	Lost
Tank	22	20
M113	29	14
TOW	6	3
Mortar	6	0
Vulcan	3	3
CAS	10	8 (1-TF Arty)

**OPFOR Losses**

System	Start	Lost
T-72	4	3
BMP	12	8
SA-14	3	0
MTLB	2	1
ZSU-23-4	1	1
AVN	8	7
HIND	4	4
Infantry	43	10



## List of Acronyms and Abbreviations

AAR	after action review
ALO	air liaison officer
AMC	U.S. Army Materiel Command
AR	Army Regulation
ATSC	U.S. Army Training Support Center
BDA	battle damage assessment
BLUFOR	blue force
CAC	Combined Arms Center/Command
CAS	close air support
CATA	Combined Arms Training Activity
CATIES	Combined Arms Training Integrated Evaluation System
CDPA	California Desert Protection Act
CERL	U.S. Army Construction Engineering Research Laboratory
CGSC	U.S. Army Command and General Staff College
CMTC	Combat Maneuver Training Center
CONUS	continental United States
CS	combat support
CSS	combat service support
DCSOPS	Deputy Chief of Staff for Operations and Plans (DA)
EIS	environmental impact statement
FAC	forward air controller
FASCAM	family of scatterable mines
FLPMA	Federal Land Policy and Management Act
FORSCOM	U.S. Army Forces Command
FWS	Fish and Wildlife Service (federal)
GOEC	General Officer Executive Committee
GPS	Global Positioning System
JRTC	Joint Readiness Training Center
LDP	Leader Development Program
LES	Laser Engagement System
LFNTC	Light Forces National Training Center
MILES	Multiple Integrated Laser Engagement System
MOPP	mission oriented protection posture
NBC	nuclear, biological, and chemical

# THE NATIONAL TRAINING CENTER MATURES 1985-1993

NTC	National Training Center
OPFOR	opposing force
O/C	observer/controller
POM	program objective memorandum
RFP	request for proposal
SAIC	Science Applications International Corporation
SAWE	simulated area weapons effects
SAWE-RF	simulated area weapons effects-radio frequency
SOCOM	U.S. Special Operations Command
TAC	Tactical Air Command (Air Force)
TACP	tactical air control parties
TF	task force
THP	take home package
VISMOD	visually modified
THRC	TRADOC Historical Records Collection
TRADOC	U.S. Army Training and Doctrine Command
USAFISA	U.S. Army Force Integration Support Agency
USAREUR	U.S. Army Europe



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